Forest Insect & Disease Management

Survey Report

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SPRUCE BUDWORM AERIAL SURVEY CHEQUAMEGON NATIONAL FOREST, WISCONSIN 1975

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INTRODUCTION

The spruce budworm, Choristoneura fumiferana (Clem.), is again of primary concern on the Lynch Creek deer-yarding area and several white spruce plantations on the Hayward Ranger District. The 1974 egg mass survey indicated a potentially high population of spruce budworm in the spruce plantations and the deer-yarding area (Lynch Creek) in 1975.[1] We resurveyed the northern half of the Forest to determine the location, acreage, and severity of spruce budworm defoliation.

METHOD

In July 1975 Duane Kick, TMA, Hayward Ranger District, and I sketch-mapped from planned flight lines the boundaries of currently defoliated white spruce and balsam fir stands on a 1/4-inch-to-the-mile Forest map. Observations were made between 0930 and 1400 from 1500 feet above ground at 110 mi/h airspeed. The following codes were used to designate severity of defoliation and stand condition:

	DEFOLIATION	STAND CONDITION
L-	Light to moderate, 0-50% of crown showing reddish-brown discoloration.	No tree mortality or top kill.
H-	Heavy, 51-100% of crown showing reddish-brown discoloration.	No tree mortality or top kill.
S-	Severe, 51-100% of crown showing reddish-brown and grey discoloration.	Tree mortality and top kill.

Ground checks were conducted to verify causal agent, locality and severity of defoliated areas.

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[1] Hastings, A.R. "Spruce Budworm Defoliation 1974, Chequamegon National Forest", NA S&PF, St. Paul Field Office Report S-7-74.

RESULTS AND CONCLUSIONS

Light to severe defoliation was observed in the southern half of the Washburn Ranger District and areas throughout the Hayward Ranger District (map). Severe defoliation in the Lynch Creek deer-yarding area for the third year has cause extensive fir mortality. Heavy defoliation is occurring in white spruce plantations on the Hayward Ranger District with no observed mortality. The Park Falls Ranger District and Medford Ranger District were not surveyed. The gross acres defoliated, which includes some mixed hardwood types, are:

Defoliation Class	Gross Acres
Light to moderate	3,700
Heavy	3,800
Severe	3,000
Total	10,500

The severity and location of the 1975 spruce budworm defoliation is similar to 1974 with the exception of several areas on the Glidden Ranger District in which light defoliation was observed in 1974, but not in 1975. The discrepancy may have been the result of haze that reduced visibility during the 1975 aerial survey.

CHEQUAMEGON NATIONAL FOREST, WISCONSIN